

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in view of the following discussion, is respectfully requested.

Claims 1-48 are pending.

The present amendment amends claims 1, 8, 12, 21-25, 35, and 36 and adds new claims 37-48. The amendment to claims 8 and 32 correct typographical errors. The amendment to claims 21 and 22 corrects the dependency of those claims. Independent claim 1 is presently amended to recite that the perceptual weight controller is configured to control the second perceptual weight such that the amount of amplitude suppression by the spectrum amplitude suppressor *decreases* for at least a portion of the spectrum, as the signal-to-noise ratio *increases*. Similar changes are made to independent claims 12, 23-25, 35, and 36. Support for these changes to claims 1, 12, 21-25, 35, and 36 is found in the originally filed claims and in Figure 9, for example. Figure 9 of the specification shows that the second perceptual weight Beta increases as the signal-to-noise ratio increases from -6 to 6 dB. Lastly, new claims 37-48 correspond to allowed claims 3, 7-9, 14, 18-20, and 30-33, respectively. Thus, the changes to the claims are not believed to raise an issue of new matter.

Additionally, previously presented claims 25, 35, and 36 are amended to emphasize further that those claims do not limit the order in which spectral subtraction and amplitude suppression are performed. The specification explains the benefits of using both spectral subtraction and amplitude suppression to reduce noise (e.g., Specification at 23-25) and, in a non-limiting embodiment, discloses that spectral subtraction is performed prior to amplitude

suppression (e.g., *id.* at Fig. 2). The order of spectral subtraction and amplitude suppression is not disclosed as a critical requirement or an essential element of the invention, and therefore, claims 25, 35, and 36 are not believed to raise an issue of new matter. *See Cordis Corp. v. Medtronic, Inc.*, 339 F.3d 1352, 67 USPQ 2d 1876 (Fed. Cir. 2003).

Further, the present invention, as disclosed, relates to the predictable arts, as shown by the specification, which discloses the benefits of performing both spectral subtraction and amplitude suppression without respect to the order in which they are performed. (E.g., Specification at 23-25.) Since the invention relates to the predictable arts, one of ordinary skill would recognize that the present inventor, by disclosing the species of Figure 2, had possession of the genus defined by claims 25, 35, and 36 at the time of filing because the ordering of spectral subtraction and amplitude suppression is not a critical or essential element of the invention. *See In re Peters*, 723 F.2d 891, 221 USPQ 952 (Fed. Cir 1983). Therefore, claims 25, 35, and 36 are not believed to raise an issue of new matter for the additional reason that the disclosure of the species of Figure 2 is sufficient to support the genus of claims 25, 35, and 36.

Before turning to the rejections on the merits, applicant first wishes to thank Messrs. Michalski and Isen for the courtesies extended during the personal interview of November 17, 2004. During the interview, the rejection of the independent claims was discussed and the arguments substantially as hereinafter presented were made with respect to the three applied references in the outstanding office action. Although no agreement was reached with respect to the ultimate patentability of this application, there was no disagreement over the

points raised by applicant's representatives, and the examiners indicated that applicant's arguments would be fully considered upon submission of a formal written response.

In the outstanding office action, claims 1, 4, 10, 12, 15, 21, 23-25, and 34-36 were rejected under 35 U.S.C. § 102(b) as being anticipated by Crozier; claims 2, 13, and 26-28 were rejected under 35 U.S.C. § 103(a) as unpatentable over Crozier in view of LeBouquin; and claims 28 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Crozier in view of Itoh. Additionally, claims 3, 7-9, 14, 18-20, and 30-33 were identified as containing allowable subject matter.

Applicant acknowledges with appreciation the indication that claims 3, 7-9, 14, 18-20, and 30-33 contain allowable subject matter. However, since Applicant presently believes itself entitled to the scope of subject matter defined by the independent claims, the allowed claims have been left in dependent form.

As noted above, claim 1 is presently amended to recite that the perceptual weight controller is configured to control the second perceptual weight such that the amount of amplitude suppression by the spectrum amplitude suppressor *decreases* for at least a portion of the spectrum, as the signal-to-noise ratio *increases*. This increase in the value of Beta results in a decrease in the amount of noise suppression, as shown by the formula on page 22 of the specification.

The outstanding Office Action acknowledges that the Crozier reference "does not disclose controlling the first and second perceptual weights to let subtraction increase or decrease with $a[n]$ increasing or decreasing signal to noise ratio." (Office Action at 13.)

Turning to column 4, lines 46-49, of Crozier, the threshold value “ τ ” increases for higher signal-to-noise ratios and decreases for lower signal-to-noise ratios. The change in τ in the equation at column 4, line 35, causes attenuation to increase at higher signal-to-noise ratios (i.e., lower values of $H(w)$) and causes attenuation to decreases at lower signal-to-noise ratios (i.e., higher values of $H(w)$). This is the opposite of what claim 1 defines, namely, that “the amount of amplitude suppression by the spectrum amplitude suppressor decreases for at least a portion of the spectrum obtained from the spectrum subtracter as the signal-to-noise ratio increases.” Thus, Crozier is not believed to anticipate or make obvious the invention of claim 1.

The LeBouquin reference fails to account for the deficiencies of Crozier. In fact, LeBouquin does not even discuss altering an amount of amplitude suppression based on the signal-to-noise ratio. Thus, LeBouquin, when considered alone or in combination with Crozier, is not believed to anticipate or make obvious the invention of claim 1.

The Itoh reference also fails to account for the deficiencies of Crozier and LeBouquin. Thus, Itoh, when considered alone or in any permissible combination with the other applied references, fails to anticipate or make obvious the invention of claim 1.

Therefore, Applicant respectfully submits that claim 1 and all claims dependent therefrom are patentable over the applied references. Since independent claims 12, 23-25, 35, and 36 define limitations that relate to a decrease in amplitude suppression as the signal-to-noise ratio increases, those claims and all claims dependent therefrom are also believed to patentably distinguish over the applied references.

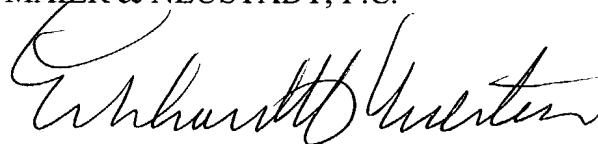
Attention is now directed to claims 37-48. These claims correspond respectively to previous claims 3, 7-9, 14, 18-20, and 30-33, which were identified as containing allowable

subject matter. Thus, claims 37-48 are also believed to patentably distinguish over the applied references.

In view of the foregoing discussion, no further issues are believed to be outstanding in the present application. Therefore, Applicant requests that the present application be allowed and be passed to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)
RCM:dnf

Eckhard H. Kuesters
Registration No. 28,870
Robert C. Mattson
Registration No. 42,850